



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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January 27, 2000

CERTIFIED RETURN RECEIPT

P 074 976 805

Lon Thomas
American Stone, Inc.
4040 South 300 West
Salt Lake City, Utah 84107

Re: Second Review of Notice of Intention to Commence Large Mining Operations, American Stone Inc., Heber Quarry, M/051/001, Heber County, Utah

Dear Mr. Thomas:

The Division has completed its review of your revised Notice of Intention to Commence Large Mining Operations for the Heber Quarry, located in Heber County, Utah. Your latest response was received November 5, 1999. After reviewing the supplemental information, the Division has the following comments which will need to be addressed before tentative approval may be granted. The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion. Please provide a response to this review by April 3, 2000.

The Division will suspend further review of the Heber Quarry large mining notice until your response to this letter is received. If you have any questions in this regard please contact me, Tony Gallegos, Lynn Kunzler, Tom Munson or Doug Jensen of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

D. Wayne Hedberg

Permit Supervisor

Minerals Regulatory Program

jb

Attachment: Review

o:\thomas\m51-01-2

2nd REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

American Stone
Heber Quarry - M/051/001
(January 27, 2000)

R647-4-105 - Maps, Drawings & Photographs

105.1 *Topographic base map, boundaries, pre-act disturbance*

The soil survey map (aerial photo) which is referenced to depict pre-law disturbances does not show significant disturbance within the life-of mine area. Since the limited area that was previously impacted has been (or will be) re-impacted by current operations, no areas impacted by this mining operation will be considered grandfathered. Reclamation will be required on all areas unless a variance is granted for certain areas to remain unreclaimed for post-mining land use. (LK)

105.2 *Surface facilities map*

Measurements made from maps 4 and 5 show significantly greater acreage being affected by the mining operation than what is reported on the maps and in the text. Please provide accurate measurements of acreage that have been, and will be affected by mining operations. These acreage needs to be broken into areas of road, dumps, highwall, quarry floor, pads, topsoil stockpiles, soil borrow areas, etc. (LK)

R647-4-106 - Operation Plan

106.3 *Estimated acreage disturbed, reclaimed, annually.*

Please provide a map showing areas to be disturbed and reclaimed annually. (DJ)

Page 4 of the NOI indicates that 9.51 acres have been disturbed to date. However, an inspection on May 29, 1998 identified 10 acres of disturbance. Map 3 shows additional areas that were disturbed after the May 29, 1998 inspection. Please provide an accurate measurement of the current disturbed area. (LK)

106.5 *Existing soil types, location, amount*

The soil survey indicates that the topsoil depth over the project area can range from 0 inches on outcrop areas (very few on project area) to over 20 inches. The NOI states that, "Care will be taken to look for and salvage existing soil when it is encountered." Since the soils map is not sufficient to determine where salvageable soils do or do not exist, a variance from not salvaging topsoil *cannot* be granted (refer to variance section). The NOI also states that soil short fall will be made up by using overburden/fines and a topsoil borrow area (shown on map 2). Please note, to replace a nominal 6 inches of soil material at the time of reclamation will require approximately 810 cubic yards of material per acre. A soil analysis of the topsoil was provided. However, a similar analysis is needed for the proposed borrow area and the overburden/fines that are proposed to be used for reclamation. (LK)

The proposed borrow area to provide topsoil for reclamation will need to be included in the mining and reclamation plan and will need to be reclaimed when the site is closed. (DJ)

106.7 *Existing vegetation - species and amount*

The response contained a brief description of the vegetation sampling. Apparently basal area was measured and submitted to us, rather than ground cover (canopy cover). No correlation between basal cover and ground cover was provided. As stated in the previous review, 5-7% vegetation cover is not accurate (expected range between 45% and 60% or higher). The Species list is acceptable. A new vegetation survey will need to be conducted next June to establish the revegetation success standard for this project. (LK)

R647-4-107 - Operation Practices

107.5 *Suitable soils removed & stored*

Suitable overburden materials and fines need to be stockpiled and saved for reclamation. Please show on the map where these stockpiles will be located. (LK)

R647-4-109 - Impact Assessment

109.1 *Impacts to surface & groundwater systems*

The operator has provided a list of all known well locations in the area and given the new practices of hauling garbage and protecting fuel supply has addressed these concerns. One concern left outstanding is the sewage control for workers onsite. Have adequate facilities been provided and approved to treat the sewage produced from onsite workers? The current Wasatch County Health Department requirement may be that a septic tank be provided for workers and their sewage. Please provide the Division with the appropriate approvals as received from the Wasatch County Health Department (contact Richard Jex at: 1-435-654-2700). (TM)

109.4 *Slope stability, erosion control, air quality, safety*

DOGM does not have the jurisdiction to determine if an air quality permit is needed for this mine site. This requirement is determined by the State Division of Air Quality (DAQ). Please provide documentation from DAQ that an air quality permit has been obtained, or that an air quality permit is not needed for this operation. (LK)

R647-4-110 - Reclamation Plan

110.1 Concurrent & post mining land use

Before the Division can approve a housing development for the post-mining land use, approval must first be obtained from the local county planning and zoning authority. Also, as discussed in the NOI, the proposed dwelling will be located above the highwall. This area, as per maps provided, would not be within the disturbed area and thus would not be subject to DOGM's approval for post-mining land use. Please provide a description of the intended post-mining land use for the areas disturbed by this operation. At this time, the Division assumes that it will remain the same as the pre-mining land use of grazing and wildlife habitat. (LK)

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed

All highwalls will be contoured to 45 degrees or less with the exception of the highwall noted in the variance request. (DJ)

110.3 Description of facilities to be left (post-mining use)

The NOI requests that a road to the top of the hill be left to provide access to build a house. All other facilities will be left. Please refer to comments under R647-4-110.1. The main access road does not appear to be needed for post mining access to the area above the highwall, since there is currently roads on either side of the quarry area that provide access to the top of the hill. The main access road would also need to be constructed through the highwall area to gain access above the highwall. Please revise the reclamation plan to reclaim the main access road. (LK)

110.5 Revegetation planting program

Please revise the timing of seeding to occur after scarification, not before. Also, given that much of the soil material that will be used is overburden and fines, and that the topsoil is low in organic matter, it will be necessary to add an organic amendment to assure reclamation success. It is recommended that composted manure or biosolids applied at a rate of 10 tons per acre be used. (LK)

R647-4-111 - Reclamation Practices

111.1 Public safety & welfare

1.14 Posting warning signs

Warning signs should be posted above the lower highwall, assuming that the variance to leave this feature is eventually approved. (DJ)

111.5 Land capable of post-mining land use

Please refer to comments under R647-4-110.1. Before the Division can fully evaluate the plan against this rule, the post-mining land use plans need to be provided. The

reclamation treatments proposed would be expected to meet a post-mine land use of grazing and wildlife habitat. (LK)

111.7 Highwalls stabilized at 45 degrees or less

See comments under R647-4-110.2. (DJ)

111.8 All roads & pads reclaimed

The NOI does not provide adequate justification to leave a road to access the top of the hill (this would need to be constructed through the highwall area at the end of mining activities). Please provide plans to reclaim all roads associated with this operation (also see comments under R647-4-110.3). (LK)

R647-4-112 - Variance

Four variances were requested in the revised NOI. However, the variance request section did not contain all the necessary information as required by R647-4-112. Items lacking included: no citation of the appropriate rule for which a variance was being requested, or an adequate justification for granting the variance. Discussed below are the four requested variances under the appropriate rule citation (given the intent for which the variance was requested). Please note, the Division will need to inspect the areas for which variances have been requested before we can grant final approval of the variances. It is anticipated that an inspection could be scheduled sometime in April, 2000.

1. A variance to **Rule R647-4-107.5 Soils** was requested to not salvage soils from areas deemed too thin or rocky by the operator (these areas were not identified on the maps provided). The NOI states that available soils will be salvaged and stockpiled for reclamation. At a proposed replacement depth of 6 inches, substitute soils and/or borrow soil will be needed for reclamation, thus demonstrating the need to salvage all topsoil. However, it appears that the intent of the operator is to salvage all available topsoil. Consequently, a variance to not salvage all available topsoil would be counterproductive. Therefore, this variance request *is denied*. (LK)
2. A variance to **Rule R647-4-111.8 Roads** was requested to leave the main road to access the top of the highwall for a future single family dwelling. The location of the road terminates at the base of the final highwall. It does not access the area above the highwall (the intended area for the dwelling). It also terminates near a pre-existing road located to the east of the operation. It appears that better access to the top of the highwall would be achieved by using the pre-existing road which already exists outside the operation. Adequate justification to leave the main access road for the post-mining land use has not been provided. Therefore, this requested variance *is denied*. (LK)

3. A variance to **Rule R647-4-111.7 Highwalls** was requested to leave approximately 375 linear feet of highwall (as shown on Map #7) at a slope steeper than 45 degrees. This highwall is at a current angle of 60 degrees (assumed). The slope above the highwall is at 38 degrees. Before the Division can grant this variance, the operator will need to demonstrate that the highwall will remain stable at an angle steeper than 45 degrees. A slope stability analysis may justify this variance request. To reduce the highwall to a 45 degree or flatter slope by regrading the crest will create less than one acre of additional disturbance. This does not take into consideration any backfilling that could be done at the base of this highwall. The variance request *is denied* at this time. (LK)
4. A variance to **Rule R647-4-111.12 Topsoil Redistribution and R647-4- 113 Revegetation** was requested to not revegetate highwall slopes steeper than 60 degrees. This variance would only apply to the 375 feet of highwall at the lower quarry (as shown on map 7). All other highwalls are planned to be regraded to a slope of 45 degrees or less. The Division concurs that trying to replace topsoil on a 60 degree slope is not feasible. Without topsoil, vegetation establishment is unlikely. Assuming that a stability analysis demonstrates that this highwall is stable and the requested variance to leave this highwall steeper than 45 degrees (see item #3, variance to Rule R647-4-111.7 Highwalls) is approved, this variance will also be approved. (LK).

R647-4-113 - Surety

A revised surety estimate is attached.

Attachment: surety estimate
o:\thomas\m51-01-2

RECLAMATION SURETY ESTIMATE

American Stone

last revision

10/12/98

Heber Quarry

filename M051-001

M/051/001

Wasatch County

Prepared by Utah State Division of Oil, Gas & Mining

-This estimate uses a D8 size dozer for most earthwork

Estimate assumes a variance for road (2.0 Acres) also .15 acres was allowed for highwall variance

Sub-soil on pit floors was placed at a 2' depth

Soil was calculated at a 6" depth over entire site

1 acre of borrow area reclamation included in total disturbance.

Note: actual unit costs may vary according to site conditions last unit cost update 08/25/99

-Amount of disturbed area which will receive reclamation treatments = 12.7 acres

-Estimated total disturbed area for this mine = 13.9 acres

Activity	Quantity	Units	\$/unit	\$	Note
Safety gates, signs, etc. (mtls & installation)	1	sum	200	200	(1)
Demolition of buildings & facilities				0	(2)
Debris & equipment removal - trucking				0	(3)
Debris & equipment removal - dump fees				0	(4)
Debris & equipment removal - loading trucks w/FE loader				0	(5)
Demolition & debris removal - general labor	10	hours	15	150	(6)
Regrading facilities areas (1 ft depth)				0	(7)
Regrading waste dump slopes 1.6 ac X 3 ft deep	7,700	CY	0.47	3,619	(8)
Ripping waste dump tops	3.8	acre	220	836	(9)
Ripping stockpile & compacted areas	0.7	acre	220	154	(9)
Ripping pit floors	4.0	acre	220	880	(9)
Ripping pit access roads	1.0	acre	220	220	(9)
Resloping Pit Highwalls	6,300	CF	0.47	2,961	(8)
Ripping access roads - dozer				0	(9)
Regrading access roads - dozer				0	(7)
Sidecast mtl replacement on steep roads- trackhoe	2,140	LF	0.85	1,819	(11)
Sub-soil placement (2' cover/ 4 acres) Pit Floors	12900	CY	0.31	3,999	(10)
Topsoil replacement - dozer	550	CY	0.47	259	(12)
Topsoil replacement - scraper				0	(13)
Topsoil replacement - truck & FE loader	8500	CY	2.55	21,675	(14)
Mulching (2 ton/acre alfalfa)				0	(00)
Fertilizing (100 lb/acre diammonium phosphate)				0	(00)
Composted manure (10 ton/acre)	11.6	acre	200	2,320	(00)
Broadcast seeding (~20 lb/acre)	12.6	acre	170	2,142	(00)
Drill seeding (~13 lb/acre)				0	(00)
Hydroseeding				0	(00)
General site cleanup & trash removal	12.9	acre	50	645	(00)
Equipment mobilization	2	equip	1000	2,000	(00)
Reclamation Supervision	4	days	372	1,488	(15)
		Subtotal		45,367	
10% Contingency				4,537	
		Subtotal		\$49,903	
Escalate for 5 years at 3.27% per yr				8,711	
		Total		\$58,614	
		Rounded surety amount in yr 2004-\$		\$58,600	
Average cost per disturbed acre =		\$4,216			

GENERIC RECLAMATION ESTIMATE

American Stone

last revision

12/01/97

Heber Quarry

filename M/051/001.

M/051/001

Wasatch County

Prepared by Utah State Division of Oil, Gas & Mining

last unit cost update

08/25/99

Note

- (1) DOGM lump sum assumed
- (2) Means Heavy Construction Cost Data 1998, 020-604-0100, mixture of bldg. types, average, excluding dump fee
- (3) Means 1998, 020-620-5100, \$0.48/mile for >8CY truck; assumed 100 miles round trip
- (4) Means 1998, 020-612-0100, dump charges, typical urban city, tipping fees only, bldg construction mtl's
- (5) Rental Rate Blue Book 4/98, Cat 988B, 7CY, & Means 1998, Crew B-10U, loading trucks only
- (6) DOGM assumed wage for unskilled general labor
- (7) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, mtl 2550 lb/CY, 50 ft push, 1 ft depth
- (8) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, mtl 2550 lb/CY, 100 ft push
- (9) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, multi shank rippers, speed 1.0 mph
- (9) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, multi shank rippers, speed 1.0 mph
- (9) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, multi shank rippers, speed 1.0 mph
- (9) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, multi shank rippers, speed 1.0 mph
- (10) Means 1998 & Rental Rate Blue Book 4/98: Cat 988B, 430 CY/hr @\$97/hr + \$38.95/hr
- (9) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, multi shank rippers, speed 1.0 mph
- (7) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, mtl 2550 lb/CY, 50 ft push, 1 ft depth
- (11) Contractor's actual costs, 1991 at E/053/012, Cat 225 Excavator, 20 ft wide road
- (10) Means 1998 & Rental Rate Blue Book 4/98
- (12) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, mtl 2550 lb/CY, 100 ft push
- (13) Means 1998 & Rental Rate Blue Book 4/98: Cat 627F P-P, mtl 2550 lb/CY, 2,000 ft haul one-way, grade +/- 4%,
- (14) Means 1998 022-266-2030: hauling excavated or borrow material, off highway hauler, 22 CY, 1 mile round trip
- (00) DOGM general estimate - mulching
- (00) DOGM general estimate - fertilizing
- (00) DOGM general estimate - manure \$16/ton delivered, \$14/acre spreading
- (00) DOGM general estimate - broadcast seeding
- (00) DOGM general estimate - drill seeding
- (00) DOGM general estimate - hydroseeding
- (00) DOGM general estimate - site cleanup & trash removal
- (00) DOGM general estimate - equipment mobilization
- (15) Means 1998, 010-036-0180, project manager, minimum \$1,815/wk

Is your RETURN ADDRESS completed on the reverse side?

SENDER: JB DOGM M'51/001 1/27/2000

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

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2. ☐ Restricted Delivery

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LON THOMAS
AMERICAN STONE
4040 S 300 W
SALT LAKE CITY UT 84107

4a. Article Number

P 074 976 805

4b. Service Type

- | | |
|---|---|
| <input type="checkbox"/> Registered | <input checked="" type="checkbox"/> Certified |
| <input type="checkbox"/> Express Mail | <input type="checkbox"/> Insured |
| <input type="checkbox"/> Return Receipt for Merchandise | <input type="checkbox"/> COD |

7. Date of Delivery

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FEB 01 2000

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